

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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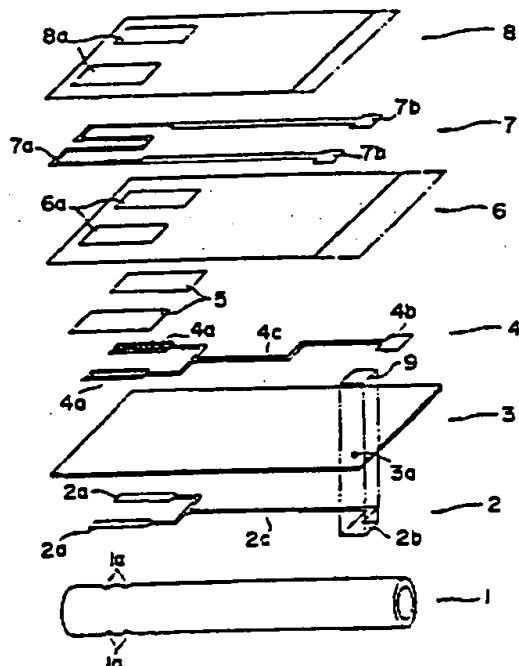
APPLICATION DATE : 25-05-89  
 APPLICATION NUMBER : 01130230

APPLICANT : NGK SPARK PLUG CO LTD;

INVENTOR : KATO AKIYOSHI;

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TITLE : PRODUCTION OF OXYGEN SENSOR ELEMENT FOR CONTROLLING AIR-FUEL RATIO



**ABSTRACT :** PURPOSE: To improve the durability of the element and to allow the measurement of a wide temp. range while suppressing the use of costly noble metals as far as possible by specifying the content of ceramics with respect to the total content of the noble metal and ceramics.

CONSTITUTION: A measuring electrode material is formed of paste I contg. 0.05 to 10wt.% ceramics with respect to the total content of the noble metal and the ceramics. A flux consisting of MgO, etc., is added to Al<sub>2</sub>O<sub>3</sub> powder and further an org. binder and butyl carbitol are added thereto to prepare the paste II. Further, sawdust is added to the paste II to prepare the paste III. The paste I is then screen-printed on a sheet. Further, the paste II is screen-printed to form films on lead parts 4c, etc., exclusive of electrode parts 4a to provide insulating layers 6, 8. Further, a protective layer 5 having 20μm thickness is provided on the electrode parts 4a, 2a by using the paste III. A heater part 7a is printed with the paste I and further the paste II is printed thereon. This sheet is wound on a cylindrical base body 1 and is calcined after the removal of the resin, by which the element is obtd.

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